The Internet Sharing plugin
PRINTED MANUAL

Internet Sharing plugin

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1 Introduction

The "Internet Sharing" is additional plugin for our data loggers (for example, Advanced Serial Data Logger) is intended for transferring log files with data received via the SMTP (e-mail), FTP (File Transfer Protocol), SFTP (Secure File Transfer Protocol) and HTTP (HTTPS) protocols. Using this plugin, you can send the data received from the COM port on e-mail, to the FTP server or any other resource in the Internet.

This module has the following distinctive features:

- The simultaneous transition to several receivers, on different data transfer protocols, including SFTP, HTTP and HTTPS, thus, individual configuration settings can be applied for each created connection;
- The appearance of message sent via e-mail can be configured (a message subject, a «From» field, a message body);
- Automatic file packing to the ZIP format archive to decrease the file size;
- The file renaming before sending;
- Check transfer status (uses file size) for FTP and SFTP protocols;
- All connection settings are saved at closing and are restored automatically at the next application start up.

2 System requirements

The following requirements must be met for "Internet Sharing" to be installed:

Operating system: Windows 2000 SP4 and above, including both x86 and x64 workstations and servers. A latest service pack for the corresponding OS is required.
Free disk space: Not less than 5 MB of free disk space is recommended.
Special access requirements: You should log on as a user with Administrator rights in order to install this module.

The main application (core) must be installed, for example, Advanced Serial Data Logger.

Notes for Microsoft Vista and above:

Since our software saves data to the registry and installs to the Program Files folder, the following requirements must be met:

1. You need Administrator rights to run and install our software
2. The shortcut icon of our software will be located on the desktop;
3. Windows Vista will ask for your confirmation to continue the installation.

NOTE: You can configure the user account only once in order not to see the above dialog box any more. Search Google for the solution of this problem.

3   Installing Internet Sharing

1. Close the main application (for example, Advanced Serial Data Logger) if it is running;
2. Copy the program to your hard drive;
3. Run the module installation file with a double click on the file name in Windows Explorer;
4. Follow the instructions of the installation software. Usually, it is enough just to click the "Next" button several times;
5. Start the main application. The name of the module will appear on the "Modules" tab of the "Settings" window if it is successfully installed.

If the module is compatible with the program, its name and version will be displayed in the module list. You can see examples of installed modules on fig.1-2. Some types of modules require additional configuration. To do it, just select a module from the list and click the "Setup" button next to the list. The configuration of the module is described below.

You can see some types of modules on the "Log file" tab. To configure such a module, you should select it from the "File type" list and click the "Advanced" button.
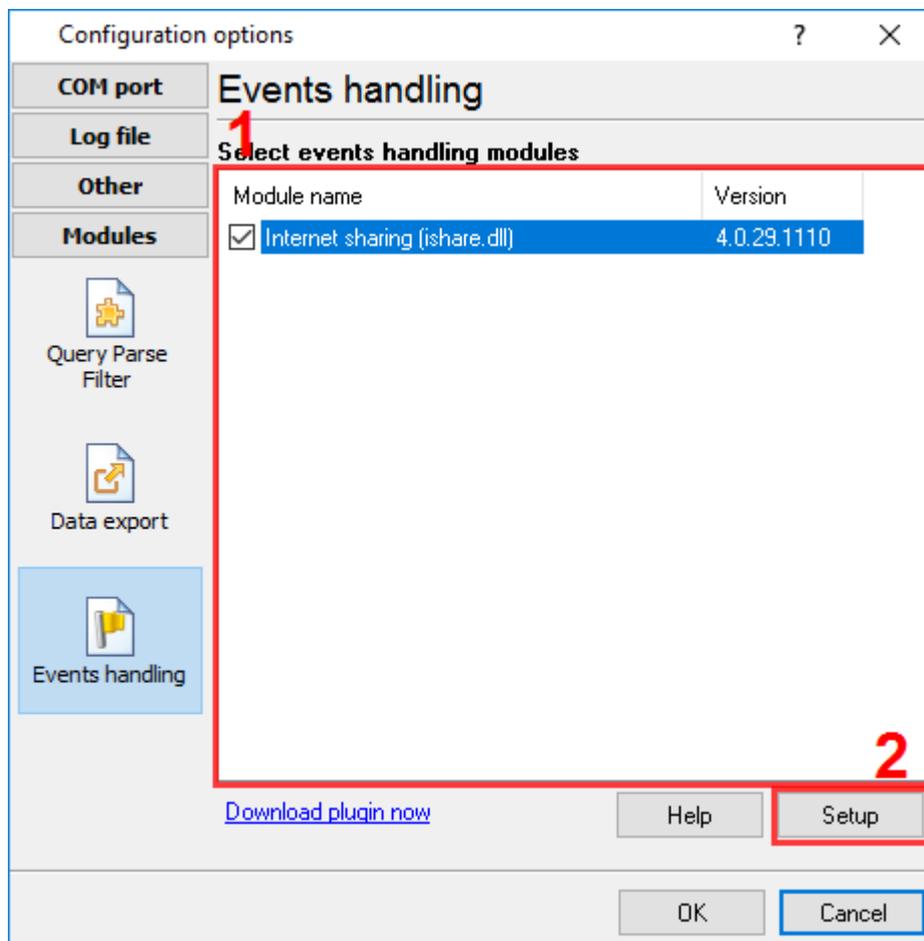

Fig.1. Example of installed module

4   Glossary

Plug-in - module

Main program – the program shell that uses this module. For example: Advanced Serial Data Logger

Parser – the module that processes the data flow singling out data packets from it and variables from data packets. These variables are used in data export modules after that.

Core - see "Main program".

5   Connection settings

Before configuring the module you are to find out the following items:

- Whether the computer with the main software installed has the constant Internet connection;
- Whether it is allowed for this computer to send and receive the data on the SMTP (e-mail), FTP or HTTP (S) (web browser) protocols.
- If the connections are allowed, find out whether the connection is established via the Proxy server or using Firewall.

You should find out all these items from your network administrator or Internet provider.

5.1   Common information

The module can transfer the data simultaneously in several directions. The receiver and the data transfer type are specified for each direction. To configure the data transfer on one of the directions it is necessary to create a connection and to specify some properties for it. For this you are to:

1.   Run the application if it is not run yet;
2.   Open the "Settings" dialog window;
3.   Open the "Modules" tab in the "Settings" dialog;
4.   Open the "Events handling" subpage in the "Modules" tab (fig.1);
5.   Select the module with the "Internet Sharing" name in the module list on this tab. If the module with this name is absent, re-install the module;
6.   Click the "Setup" button;
7.   Click the "Add" button on the "Connections" tab. In the appeared window enter a connection name (for example, "My FTP" or "John Doe", etc.)
8.   Select connection type, change necessary options and click "OK" in the dialog box (fig.3). The connection will appear in the connection list (fig.2);
9.   Set up a mark before the connection name to enable selected connection for operations (fig.2).
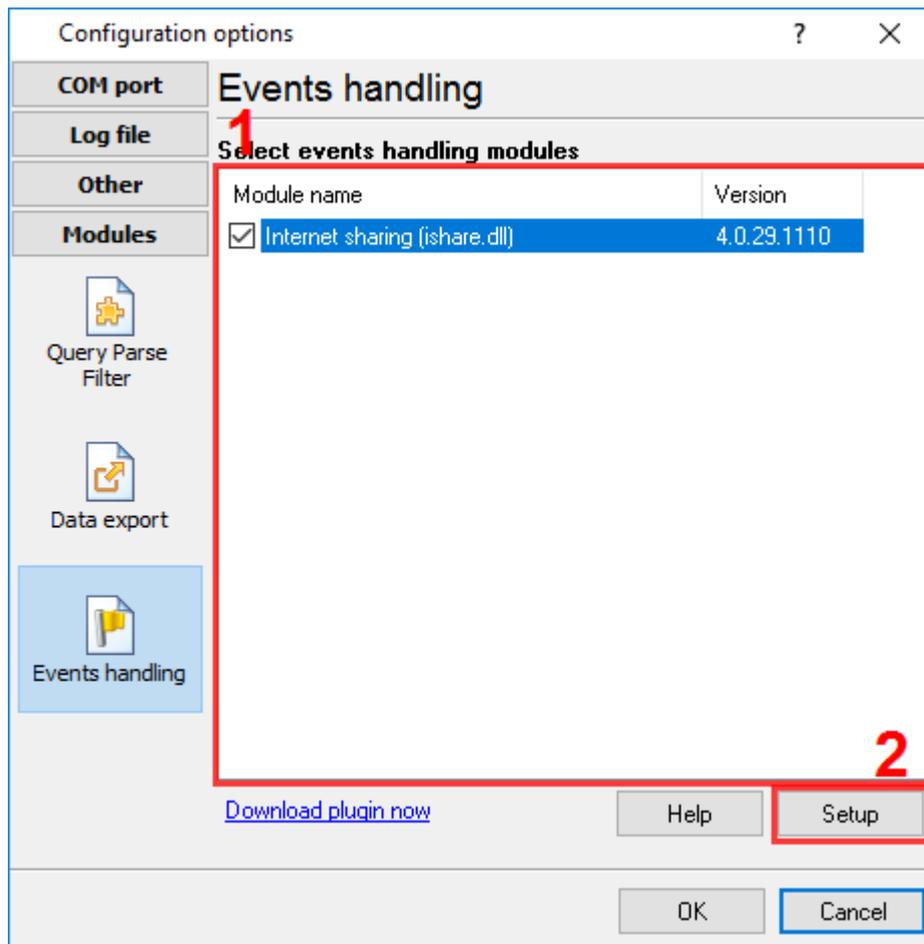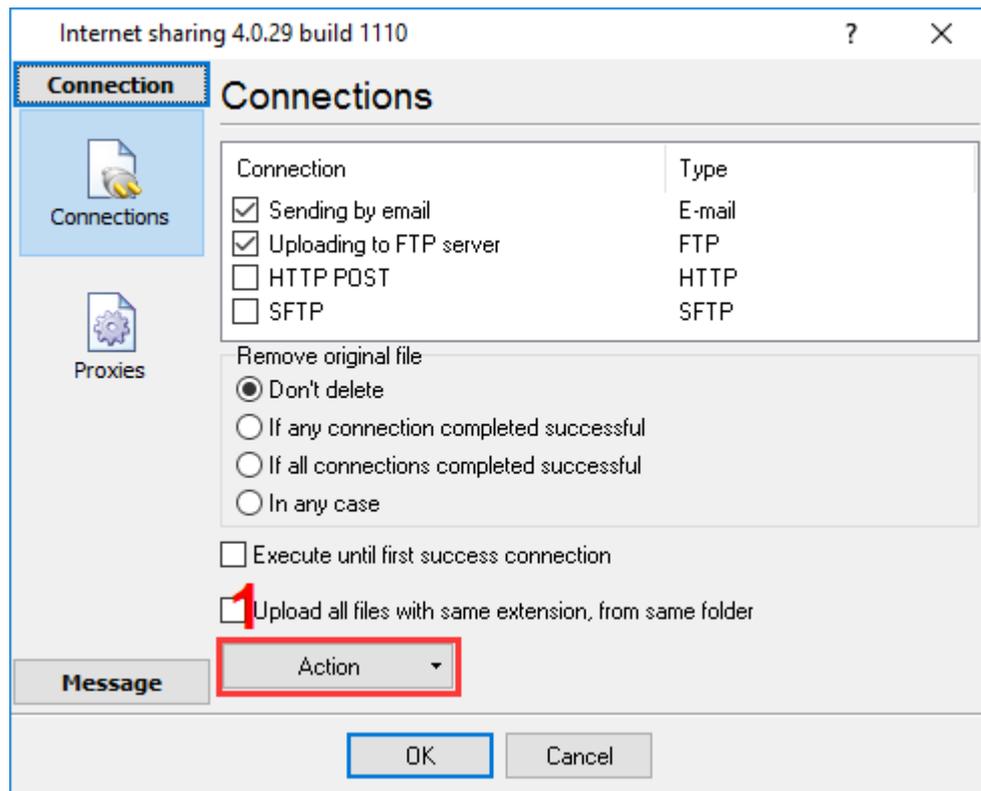
Fig. 1 Events handling plugins

Fig. 2 Connection list

The window on the fig.2 has "Action" button, that allow you add and emove connections, save and load configuration to/from file. Also you can check your connection before regular operations. Just configur connection and select "**Check connection**" menu item. In the appeared progress window you'll see messages, that illustrates operations with file. (fig.2a). For testing program will create temporary file **test.data.log** and upload it with selected connection. After testing program will delete this temporary file. You need delete temporary file from host (remote) PC by hand.

Fig.2a Progress window

"Internet Sharing" plugin allows you to remove original file after all operation with him (fig. 2), that allow you save space on disk on a local PC. Use group "**Remove original file**" and select necessery option.

If your data is very important and a internet connection can be interrupt at any time, then you can create a few connection, that can transfer one file in different places. The option "**Execute until first success connection**" allows you send file to one location only, if you've created a few different connections for one host PC.
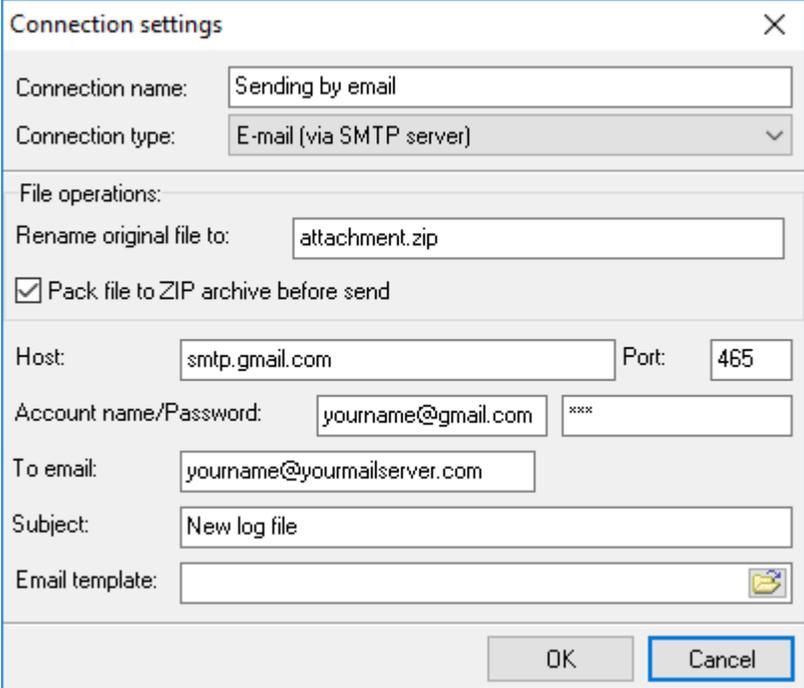
Fig. 3 Connection type settings

Each connection type has few identical parameters:

Rename file to - allow you to rename a source file for the current connection. You'll always receive file with these name.
Pack file to ZIP archive before send – allow you pack it to the ZIP archive to decrease the file size and transferring time.

Renamed and/or packed file will have been created before each connection and deleted after connection with any status.

5.2   E-mail (via SMTP server)

This connection type enables you to send files with data as e-mail messages. Each file with data will be attached to the message. The data are sent via the SMTP protocol, being standard for sending e-mail messages. All the sent messages have identical sender data, which you can set on the «Message/From info» tab (fig. 4).

You are to specify the following properties to configure the connection (fig. 3):

- **Host** – the SMTP server name. You can learn this value in the technical support service of your mail client from the network administrator. For example: mail.yahoo.com;
- **Port** - the SMTP server port. You can learn this value in the technical support service of your mail client. By default: 25;
- **Account name** – the mail box name (for example: yourname@yourserver.com);
- **Password** – the mail box access password;
- **To e-mail** – the message recipient's e-mail address;
- **Subject** – the message subject;

- **E-mail template** – the message template is a plain text file, which you can create manually in a text editor (for example, NotePad), and in which you can use a set of special variables to include the variable data into the message. In the template you can use the following variables:

    - **%ToName%**. The name of the e-mail recipient specified in the Connection Settings.
    - **%FromName%**. The sender name;
    - **%FromMail%**. The sender address;
    - **%Company%**. The company name.

    The information for the «Reply-to address» field:
    - **%ReplyToName%**. The sender name for the reply-to address;
    - **%ReplyToMail%**. The sender address for the reply-to address

Fig. 4. Sender information settings.

5.3   HTTP (Hyper Text Transfer Protocol)

Any HTTP connection can be established via the Proxy server. The Proxy server settings are identical for all connections and are available on «Connection / Proxies» tab (fig. 5). Different proxy servers can be used for the HTTP, HTTPS or FTP connections. To simplify its use you can import the proxy server settings from the Microsoft Internet Explorer "Connection settings". For this, just enable the «**Use proxy**» option and then enable the «**Take from IE**» option. Now at each application start-up the proxy server settings will be loaded automatically. If you prefer to configure the proxy server settings manually disable the «**Take from IE**» option. Now the proxy server input fields are available for editing. If you use one proxy server for all protocols enable the «**One address for all protocols**» option and enter the necessary data into the one field available for editing.
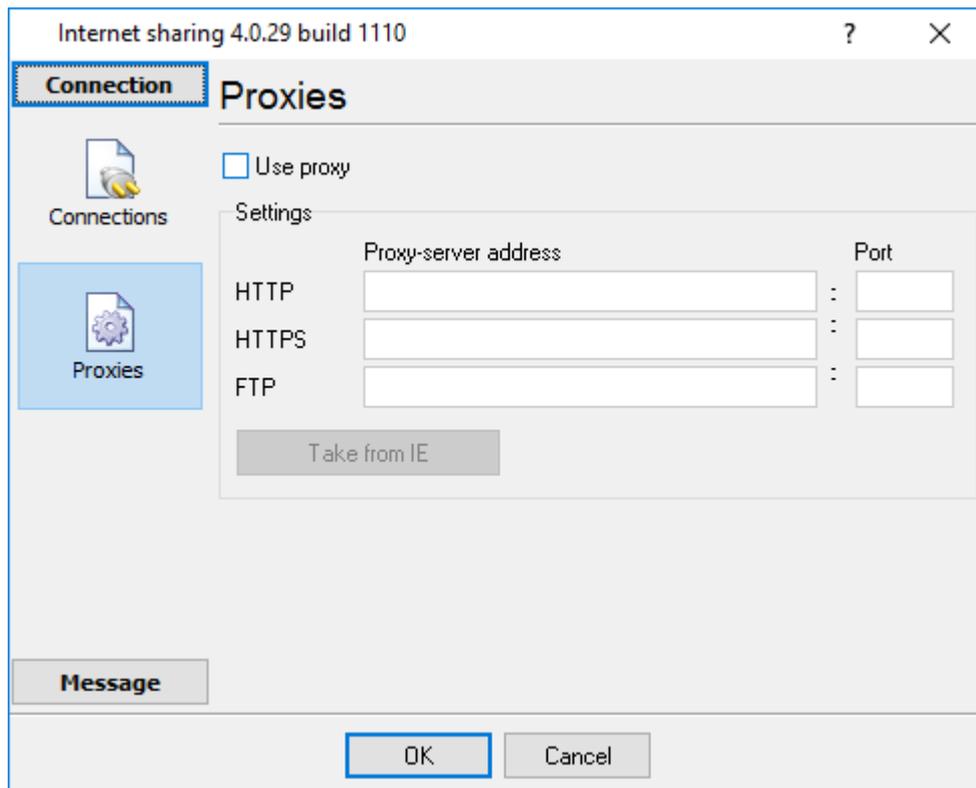
Fig. 5. Proxy server settings.

To configure the connection on the HTTP protocol you are to specify the following values (fig. 6):

- **Script URL** – The URL of the script or executable program in the Internet, which will receive and process the file with data;
- **Field Name** - The parameter name with a transmitted file name as its value.
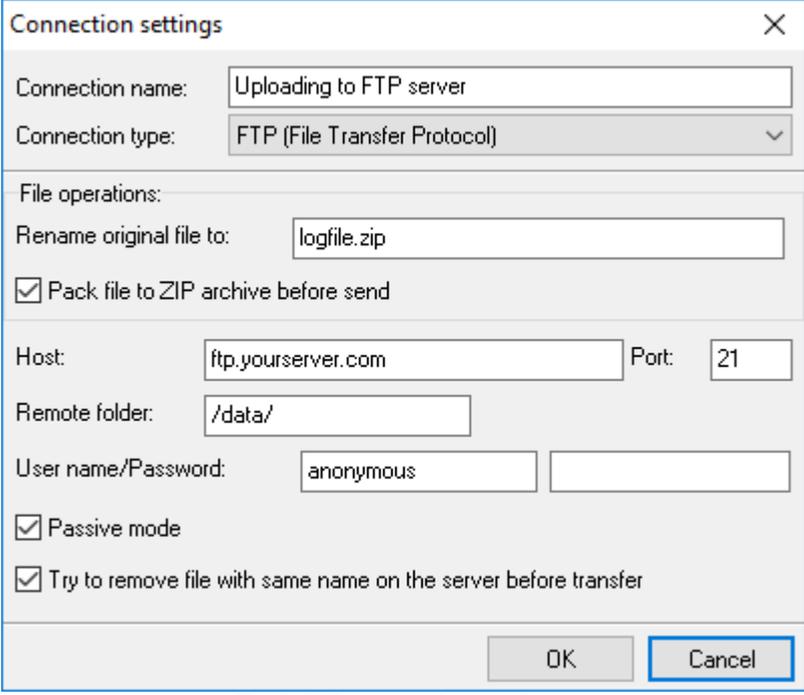
Fig. 6. HTTP connection settings.

The script being requested, the «multipart/form-data» method of data transmission is used as the most effective one to transmit large volumes of information. Thus, the utility or the script processing requests on your server must recognize this format process it in the proper way.

5.4 FTP (File Transfer Protocol)

To configure the connection on the FTP protocol you are to specify the following values (fig. 7):

- **Host** – the name or the IP-address of the FTP server (for example: «127.0.0.1», «ftp.yourserver. com»);
- **Remote Folder** - the name of the folder on your server for the file to be transferred. If the field is empty, the file will be transferred to the folder defined by default for the user, the connection being established on his/her behalf. If the folder does not exist, it will be created if the user has the corresponding permissions;
- **Passive** - if the option is enabled, the connection to the server will be performed in the passive mode;
- **Port** – the port for data transfer on the FTP protocol. By default - 21 for FTP connection and 22 for SFTP connections;
- **User name** – the user name for connection to the FTP server. You can learn this value in the technical support service of the company providing you with a FTP server.
- **Password** – the password for the access to the FTP server.
- **Try to remove file with same name on the server before transfer** - Some (S)FTP servers don't allow overwrite existing file. This options allows you to delete old file from the host PC and upload new one.

Fig. 7. FTP connection settings

5.5   SFTP (Secure File Transfer Protocol)

SFTP is the secure file transfer protocol client implementation. It works over secure SSH channel (and has nothing common with FTP protocol). SFTP works as a subsystem of SSHv2 protocol, i.e. SFTP negotiation flow is following:

- TCP connection is established
- Secure SSH connection is established
- SFTP handshake is performed over SSH channel

Options of this method identical of FTP connection type. Just only passive mode isn't avalaible.

Fig.8. SFTP connection options

6   Troubles?

6.1   Possible problems

No data for publication/exporting – no data is passed for exporting. Solution: configure the parser, make sure that one or more variables are declared in the parser.

Error on binding variable with name %s [%s] – the error usually occurs if data does not correspond to the specified format. For example, the date and time format does not correspond to the data.

Unable to disconnect from the database [%s] and **Unable to connect to a database [%s]** – it is impossible to connect/disconnect to/form the database. You should check the parameters of the database connection. The analysis of the additional information will help you locate the error.

Database access error [%s]. Stop operations with the database? – the message appears if an error occurs during an attempt to execute an SQL query if the second variant of reacting to errors is selected. The message implies a "Yes" or "No" answer. The analysis of the additional information will help you locate the error.

Unable to verify your SQL script [%s] – the message appears when an attempt to analyze your SQL query fails. Check if the syntax of your SQL query is correct.

Tested successfully – the message appears if your database connection is successfully tested. It requires no additional actions.

Database isn't used – the message appears if the module is temporarily disabled (the "Temporarily disabled" check box is selected) or the database name field is empty. Check the connection parameters.

Database isn't selected - the message appears if the database type is not selected. Check the connection parameters.

Database: %s – %s contains the database name. The message appears if the database connection is successful. Usually, you see it when you call the module for the first time. It requires no additional actions.

Invalid data block length (columns=%d,length=%d) – an internal application error. It means that the data sent by the parser is in an invalid format. Perhaps, you are using the module incompatible with the version of the Advanced Serial Data Logger kernel. Update the versions of both the kernel and the module.

The time of connection is not due yet (%d,%d) – the message appears during an attempt to connect to the database after the connection to it has been lost and the "Reconnect after" option is enabled. No additional actions are required.

Invalid procedure call. Bad arguments –an attempt to call the module using invalid parameters. Perhaps, you are using the module incompatible with the version of the Advanced Serial Data Logger kernel. Update the versions of both the kernel and the module.

Writing to the database is complete - the message appears if your queue of SQL queries is successfully executed. It requires no additional actions.

Writing to the database is complete with errors – the message appears if the executing your queue of SQL queries was interrupted by an error. It requires no additional actions.

Your SQL is empty. Please, specify some SQL text first – the message appears if you do not enter the text for your SQL query. Check if the options on the "SQL queue" tab are configured correctly.

Invalid temporary path – the path to the temporary file specified by you does not exist. Enter a new path in the "Temporary folder" field on the "Errors handling" tab.

%s, %d – will be replaced by additional information.